Deber 6e
Estatica

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5) $r_{F/A} = \langle a, -a \rangle$

$P = \langle 0, P/\sqrt{2}, -P/\sqrt{2} \rangle$

$M_A = r_{F/A} \times P$

$$M = \begin{pmatrix} i & j & k \\ a & -a & -a \\ 0 & P/\sqrt{2} & -P/\sqrt{2} \end{pmatrix}$$

$M = \langle \frac{aP}{\sqrt{2}} + \frac{aP}{\sqrt{2}} \,/\, -\frac{aP}{\sqrt{2}} \,/\, \frac{aP}{\sqrt{2}} \rangle$

$M = \langle \frac{2aP}{\sqrt{2}} \,/\, -\frac{aP}{\sqrt{2}} \,/\, \frac{aP}{\sqrt{2}} \rangle$

$\lambda = \frac{\langle a, -a, -a \rangle}{a\sqrt{3}} = \langle \frac{\sqrt{3}}{3}, -\frac{\sqrt{3}}{3}, -\frac{\sqrt{3}}{3} \rangle$

$$M = \begin{pmatrix} \chi\sqrt{3} & -\chi\sqrt{3} & -\chi\sqrt{3} \\ a & -a & 0 \\ 0 & P/\sqrt{2} & -P/\sqrt{2} \end{pmatrix} \Rightarrow -aP/\sqrt{6} \;//$$

6) $M_x = -540 \text{ lb in}$

$M_y = 240 \text{ lb in}$

$M_z = 180 \text{ lb in}$

$M = \langle -540, 240, 180 \rangle \text{ lb in}$

$M = \langle -540, 240, 180 \rangle \text{ lb in}$

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7) $F = \langle 0, -400, 0 \rangle N$

$M_O = \overline{O_B} \times F$

$M_O = \begin{pmatrix} i & j & k \\ 0{,}150 & 0{,}260 & 0 \\ 0 & -400 & 0 \end{pmatrix} \Rightarrow -60\,Nm\,k$

$-(84\,Nm)k = \overline{OC} \times F$

$= -OC\cos 60\, 400\, k$

$OC\cos 60 = 210mm$

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